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Stormwater Pollution Prevention Plan
Longview Fibre Box Plant
Seattle, Washington

Permit No. S03-000206

Prepared for Longview Fibre Company
November 1993

Revised August 2001
Revised December 2005

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Project 0732-003.02

CONTENTS

FIGURES

Figures

Stormwater Pollution Prevention Plan
Amendment
Documentation Form

Date	Description of Amendment	Approval
8/25/01	Add: Hydrochloric Acid to both lists of chemicals on page 2-4	
8/25/01	Change: Inks washed from containers deposited in the on-site dumpster on page 2-5	
8/25/01	Change: Plant Manager name from Norman Buckholz to Tom Craig and annual inspectors name to Jim Mantell on page 4-1.	
8/25/01	Replace: Materials handled at facility that could present a hazard to the Storm Drain System 4.1.4 on page 4-2	
8/25/01	Add: This source control BMP was implemented on January 1, 1995 on page 4-4	
8/25/01	Change: Capital BMPs were implemented on January 1, 1995 on page 5-1	
8/25/01	Updated: figure 2-2 site map	
8/25/01	Change: Capital BMPs implemented as of August 2001 on page 4-4	
11/15/05	Reviewed and revised the entire manual.	

1. INTRODUCTION

1.1 Background

United States Environmental Protection Agency (EPA) regulations (40 CFR 122-124) require National Pollutant Discharge Elimination System (NPDES) permits for municipalities and industries that discharge stormwater. The Washington Department of Ecology (Ecology) has created a NPDES and State Waste Discharge General Permit for Stormwater Discharges Associated with Industrial Activities (Permit) to cover industries that discharge stormwater from their sites.

Ecology issue a baseline general stormwater Permit (#S03-000206) to Longview Fibre Company (Fibre) for their box plant in Seattle, Washington on December 28, 1992. Copies of Fibre's application (Notice of Intent) and the Permit are included in Appendix A. Section S9 of the Permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) for the facility by November 18, 1993. This SWPPP has been prepared to comply with that Permit condition.

1.2 Objectives

The objectives of this SWPPP are:

- To eliminate the discharges of unpermitted process wastewater, domestic wastewater, and non-contact cooling water to stormwater drainage system.
- To implement Best Management Practices (BMPs) to identify, reduce, eliminate, and prevent the pollution of stormwater.
- To prevent violations of surface water quality, groundwater quality, or sediment management standards.

The stormwater pollution prevention measures outlines in this SWPPP are intended to meet, or exceed, the requirements of Section S9 of the Permit.

1.3 SWPPP Format

The format and content of the SWPPP is consistent with the requirements outlined in Section S9 of the Permit. The Ecology guidance document, *Stormwater Management Manual for Western Washington,* was used to supplement the Section S9 requirements.

1.4 SWPPP Retention and Modification

Copies of the SWPPP can be found in the Plant Manager's office at the Seattle facility and in the Environmental Department of the Fibre Company facility in Longview, Washington. Fibre will retain the SWPPP and copies of all notices of intent, inspection reports, spill reports, and all other reports required by this Permit for at least five years from the date of the report or submission. Fibre will make these reports available to Ecology or Metro, upon request.

Any revision will be documented in the Amendment Form found at the beginning of this Plan. The SWPPP will be revised whenever:

- Ecology notifies Fibre that this SWPPP does not meet one or more of the minimum requirements of a permit. Within 30 days of the notice, Fibre will submit a plan for modification to the SWPPP and an implementation schedule.

- There is a change in design, construction, operations, or maintenance that causes the SWPPP to be less effective in controlling pollutants.

- A self-inspection reveals that the description of potential pollutants sources or the pollution prevention measures and controls identified in the SWPPP as inadequate.

- Annual reviews of the manual indicate revisions are needed.

2. SITE DESCRIPTION

2.1 General Location

Fibre owns and operates a box plant at 5901 East Marginal Way South, Seattle, Washington (Figure 2-1). The site is approximately 3.36 acres and is bordered by the Duwamish River on the west, SW Fidalgo Street on the north, and East Marginal Way South on the east (Figure 2-2). Approximately 90% of the property is covered by the building structure.

Land use within a 1-mile radius of the site is predominantly light industrial.

2.2 Site Drainage

Figure 2-2- shows property boundaries, buildings, paved areas, areas of material storage and handling, drainage pattern, the stormwater discharge points, and surface water location. Stormwater from the site is conveyed through sheet flow to two off-site catch basins located in the parking lot bordering the Duwamish River. This parking lot is not part of the plant's property. The two catch basins capture stormwater from the parking lot, some roof drains, and part of SW Fidalgo Street. The majority of stormwater falls on the roof of the plant and is conveyed off-site through Outfall 001. A minor amount of stormwater is captured by three south side catch basins and one north side catch basin and discharged to the cities sanitary sewer system.

2.3 Industrial Activities

The Seattle Box Plant manufactures corrugated boxes for buyers throughout the Northwest. Activities associated with this corrugated box manufacturing include gluing, printing, laminating, and shipping. The following outlines the primary industrial activities at the facility:

- Box Manufacturing - Processing raw paper into corrugated boxes.
- Storage - Tanks containing diesel, sodium hydroxide, and starch. Ink stored in totes and drums.
- Shipping - Transferring finished boxes onto trucks, unloading liquid chemicals, and unloading solid materials.

- Fuel - Aboveground diesel fuel tank used as a backup fuel source for the boiler

- Maintenance - Processing machinery maintenance and repair

All manufacturing, storage, shipping, and maintenance activities are performed inside buildings with minimal potential for pollutants entering the stormwater system.

2.4 Materials Inventory

A number of materials have been handled at the Seattle box plant site since 1989. Materials handled at the site include:

- Hydrochloric Acid
- Diesel
- Sodium hydroxide
- Ketone Aldehyde (Proguard)
- Corn starch
- Sodium biborate pentahydrate (Three Elephant V-Bor)
- Propylene glycol methyl ether
- Printing ink (water based)
- Unbleached paper
- Corrugated boxes
- Wooden pallets
- Scrap metal
- Propane

Material safety data sheets (MSDS) for the four most common chemical products used in the manufacturing processes at the facility are contained in Appendix D. Materials that have potentially been exposed to stormwater include:

- Hydrochloric Acid
- Diesel
- Sodium hydroxide
- Corn starch
- Printing ink (water based)
- Wooden pallets
- Scrap metal
- Propane

2.5 Potential Pollutants

Pollutants that may be present in stormwater discharges from activities at the Seattle Box Plant include:

- Sediment and debris (suspended solids) from SW Fidalgo Street and the west parking lot
- Oil and grease from vehicles on SW Fidalgo Street and the west parking lot
- Water treatment plant solids deposited in on-site dumpster

The facility has not experienced a significant spill or leak of toxic or hazardous pollutants, nor have significant materials, other than those described in Section 2.5 been handled, treated, stored or disposed of in a manner to allow exposure to stormwater in the last three years.

2.6 Discharge Points/Receiving Water

The Permit requires that all discharge points for stormwater leaving the site be identified and located on a site map (Figure 2-2). There are two discharge points that discharge stormwater from the facility. The majority of the stormwater that falls on the plantsite falls on the roof of the plant. Discharge point #1 is the single roof drain discharge point inside the plants roll storage warehouse. Approximately 90% of the stormwater that falls on the site flows through this location. This roof drain connects with other drains (catch basins) in the road and then flows into a discharge pipe that discharges into the Duwamish River. There are also catch basins on the south and north side of the building that drain to the cities sanitary sewer system. These would be discharge points #2. On Fidalgo Street itself there are catch basins that drain into an outfall pipe. This pipe flows into the Duwamish River. We do not believe that these catch basins are on our property.

3. NON-STORMWATER DISCHARGE CERTIFICATION

Section S3.A of the Permit states that discharges of process wastewater, domestic wastewater, or non-contact cooling water to a storm sewer or surface water are prohibited. Under Section S9.D.1.a, a responsible official must certify that non-stormwater discharges from the site are not present. A copy of Fibre's certification for the Seattle facility is included in Appendix B.

As required by Section S6.A.3, Fibre will conduct an annual inspection to ensure that non-stormwater discharges are not occurring on the site.

4. BEST MANAGEMENT PRACTICES

Best Management Practices (BMPs) are designed to help eliminate the potentials for contaminants entering the stormwater system. The following sections describe appropriate operational and source control BMPs for the Seattle Box Plant. A site inspection determined that erosion and sediment control and treatment BMPs were not needed for this facility.

4.1 Operational BMPs

Section S9.D.2.a lists six operational BMPs that must be followed to be in compliance with the Permit. The Seattle facility's compliance with these BMPs is described below.

4.1.1 Pollution Prevention Team

A pollution prevention team can have a minimum of one member or several members, depending on the size and structure of the facility. Members of Fibre's pollution prevention team for the Seattle box plant include:

- George Mitchell – Plant Manager, Seattle, Washington. Mr. Mitchell is responsible for ensuring that all provisions of this SWPPP, including capital BMPs, are implemented.

- Mike Anderson – General Supervisor, Seattle, Washington. Mr. Anderson, will supervise the bi-annual inspections of the stormwater discharge system, conduct the annual training, and be responsible for ensuring that non-capital BMPs are implemented.

4.1.2 Good Housekeeping

Good housekeeping BMPs are comprised primarily of routine maintenance and cleanup. Appendix C outlines some basic good housekeeping activities designed to reduce the potential for contaminants entering the stormwater system. One aspect of good housekeeping is to make employees aware of the chemicals they are utilizing.

Appendix D contains Material Safety Data Sheets (MSDSs) for five of the most common products used at the Seattle Box Plant.

4.1.3 Preventive Maintenance

Routine inspections and maintenance of manufacturing machinery and stormwater drainage systems helps eliminate problems associated with contaminating stormwater. Part of preventive maintenance includes the forming of a pollution prevention team (Section 4.1.1) and performing annual inspections of the stormwater system during the dry time of year and during the wet time of year (see Section 4.1.6). Appendix C outlines preventive maintenance BMPs in more detail.

4.1.4 Spill Prevention and Emergency Cleanup

Identifying potential spill areas and having the proper cleanup materials available provides a major preventive measure in assuring contaminants do not enter the stormwater system. The materials handled at the facility that could present a hazard to the storm drain system are: Water treatment chemicals, starch additives, board coatings, ink and ink additives, and lubrication oils. Emergency spill kits are located in our Maintenance shop next to the loading dock and by our water treatment plant and oil storage area.

4.1.5 Employee Training

Section S9.D.2.a.v requires that employees be given training on spill response, good housekeeping and material management practices on an annual basis. The SWPPP will be made available to employees and pollution prevention team members will see to it that all employees are aware of the contents of the SWPPP and receive required training.

4.1.6 Inspections and Recordkeeping

Facilities covered under the Permit must complete two inspections per year as outlined in Section S6.A of the Permit. A dry season inspection (May 1 – September 30) and a wet season (October 1 – April 30) will be completed by the Pollution Prevention Team or the plants environmental coordinator.

The dry season inspection is designed to determine the presence of unpermitted non-stormwater discharges. Dry season inspections will be conducted after a period of extended dry weather to allow time for residual stormwater in the system to

discharge. The EPA recommends that a minimum of three days of dry weather pass before conducting the dry season inspections. Stormwater outfalls should be dry during the dry season inspection; if water is discharging from the outfall during the dry season inspection, a non-stormwater source is most likely the source. All catch basins and stormwater conveyance structures will be inspected at this time. A Stormwater Site Compliance Inspection Report (Appendix E) on the dry season inspection will be completed and included in the SWPPP. The written report will be signed and dated by the individual conducting the inspection.

If an unpermitted, non-stormwater discharge is discovered, the facility will comply with General Condition G3 and report the non-compliance to Ecology.

The wet season inspection must be conducted during a rainfall event. Although a rainfall event is not specifically defined by Ecology, Ecology personnel recommend that the wet season inspection be conducted during the first major rainfall event after October 1.

The purpose of this inspection is to verify that the description of potential pollutant sources is accurate, the SWPPP site map reflects current conditions, and that BMPs are being implemented and are adequate.

The wet season inspection will include observations of the presence of floating materials, suspended solids, oil and grease sheens, discolorations, turbidity, sedimentation, odor, etc. An Inspection Report on the wet season inspection will be made and included in the SWPPP. The report will be signed and dated.

If an inspection reveal that the description of potential pollutant sources or the pollution prevention measure and controls identified in this SWPPP are inadequate, this SWPPP will be modified, as appropriate, within two weeks of the inspection. The facility will implement any necessary modifications in a timely manner.

4.2 Source Control BMPs

Source control BMPs for industrial activities are broken down into non-capital and capital improvement source control activities. Non-capital improvement BMPs are activities that do not require much effort or money to implement; capital improvement BMPs require a significant amount of time and money to implement. Most of the operational BMPs outlined for the Seattle Box Plant fall under the non-capital improvement category. Appendix C outlines the source control BMPs for the Seattle Box Plant.

Source control BMPs were selected using the following references:

- Stormwater Management Manual for the Puget Sound Basin, Washington, Department of Ecology, February 1992.
- Stormwater Pollution Prevention Planning for Industrial Facilities – Guidance for Developing Pollution Prevention Plans and Best Management Practices, Washington Department of Ecology, September 1993.
- Stormwater Management Manual for Western Washington, August 2001.

The non-capital improvement source control BMPs are of a good housekeeping nature (e.g., annually inspect catch basins), so an in-depth explanation for each one is not necessary. This SWPPP identified the following capital improvement source control BMP:.

- Relocate and build containment around the sodium hydroxide fill pipe.

This source control BMP was implemented on January 1, 1995.

- Rerouted the drain from the compressor to a floor drain and installed containment
- Rerouted drains from the containment areas around the diesel and starch tanks to the city sewer
- 1998 – Maintenance set to do quarterly cleaning of the roof
- 1999 – Reviewed caustic unloading procedures with all foremen
- 2001 – New oil storage area containment
- Anything new to go in here? From the audit?

5. IMPLEMENTATION SCHEDULE

Section S9.D.4 requires an implementation schedule for selected BMPs. Appendix F contains a BMP implementation schedule for the Seattle Box Plant. Non-capital BMPs will be implemented by November 18, 1994; capital BMPs were implemented on January 1, 1995.

6. MONITORING

Sampling and analysis of stormwater is not currently required under Ecology's Baseline General Permit for Stormwater Discharges. Under certain circumstances sampling and analysis of stormwater may be appropriate for the development of a SWPPP or for evaluating the effectiveness of a SWPPP. However, for the purposes of this SWPPP, it was determined that it was not necessary to collect or analyze stormwater samples from the Seattle Box Plant's stormwater outfall.

If sampling is determined to be necessary at some time in the future, Ecology recommends the following analyses:

- Total Suspended Solids (TSS)
- Specific conductance
- Oil and grease (OG)
- pH
- Any additional analyte that may be present in your stormwater

REFERENCES

40 Code of Federal Regulations. Part 122 – EPA *Administered Permit Programs: The National Pollutant Discharge Elimination System.*

USEPA. 1992. *Stormwater Management for Industrial Activities – Developing Pollution Prevention Plans and best Management Practices.* USEPA document #832-R-92-006.

Washington Department of Ecology. 1992. *Stormwater Management Manual for the Puget Sound Basin.*

Washington Department of Ecology. 1993. *Stormwater Pollution Prevention Planning for Industrial Facilities – Guidance for Developing Pollution Prevention Plans and Best Management Practices.*

Washington Department of Ecology. 2001. *Stormwater Management Manual for Western Washington.*